Figure 3 shows a procedure for isolating nucleic acids provided in the invention.

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Figure 4 -8 show another construction of a system for the release and isolation of nucleic acids in accordance with the invention.-- ;

line 13, delete "cells of viral or bacterial origin" and substitute therefor --viruses or cells of ~~bacterial origin --~~; and

last line, delete ~~"wand"~~ and substitute therefor -- wall--.

IN THE CLAIMS:

Please delete claims 1-12 without prejudice or disclaimer.

Please add new claims 13-35 as follows:

Sub B1

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--13. (NEW) A method of isolating nucleic acids from biological compartments of a fluid sample comprising the steps of:

incubating the sample in a sample processing vessel with magnetic particles which magnetic particles are capable of binding with the biological compartments;

positioning at least one magnet near an outside wall of the sample processing vessel such that the magnet holds the magnetic particles against an inside wall of the sample processing vessel;

removing the remaining fluid, from which the biological compartments have been separated, from the sample processing vessel;

introducing a second fluid into the sample processing vessel;

resuspending the magnetic particles in the second fluid by eliminating the magnetic force which held the magnetic particles against the inside wall of the sample processing vessel, and shaking the sample processing vessel;

lysing the biological compartments to form a lysis mixture; and

isolating the nucleic acids from the lysis mixture.

14. [(NEW)] The method of claim 13, wherein essentially all of the magnetic particles have a diameter of 2.8 µm to 200 µm.

15. [(NEW)] The method of claim 14, wherein the average magnetic particle size diameter is about 10 µm to 15 µm.

16. [(NEW)] The method of claim 13, wherein the isolation step comprises immobilizing the nucleic acids on the magnetic particles.

17. [(NEW)] The method of claim 13, wherein the nucleic acids to be isolated are transferred to a vessel from which they may be pipetted.

18. [(NEW)] The method of claim 13, wherein the magnetic force is eliminated by separating by a sufficient distance the at least one magnet from the outside wall of the sample processing vessel.

19. [(NEW)] The method of claim 13, wherein the magnetic force is eliminated by positioning a μ-metal between the vessel and the at least one magnet.

sub B3 > 20. [(NEW)] The method of claim 13, wherein each magnet has a mass of about 0.5 g to 5 g.

A3 cont 21. [(NEW)] The method of claim 13, wherein each magnet has a mass of about 1 g to 4 g.

22. [(NEW)] The method of claim 13, wherein the processing vessel containing the sample is shaken during at least a portion of the incubation step to facilitate binding.

23. [(NEW)] The method of claim 13, wherein the magnetic force is eliminated and the sample processing vessel is shaken simultaneously.

24. [(NEW)] The method of claim 13, wherein the steps of positioning at least one magnet near an outside wall of the sample processing vessel such that it holds the magnetic particles against an inside wall of the sample processing vessel, removing the remaining fluid, from which the biological compartments have been separated, from the sample processing vessel, and resuspending the magnetic particles in a second fluid by eliminating the magnetic force which held the magnetic particles against the inside wall of the sample processing vessel, and shaking the sample processing vessel, are repeated until the biological compartments have reached a desired level of purity.

25. (NEW) The method of claim 13, wherein the fluid sample is a body fluid.

26. (NEW) The method of claim 13, wherein the fluid is blood, saliva or urine.

27. (NEW) The method of claim 13, wherein the nucleic acids are isolated by warming the lysis mixture for a sufficient period of time so as to lyse or partially or completely decompose cell walls of the biological compartments and release the nucleic acids contained in the biological compartments, and cooling the lysis mixture under conditions that make it possible to isolate or hybridize the nucleic acids to be isolated or detected.

28. (NEW) The method of claim 27, wherein the lysis mixture is warmed to a temperature of around room temperature or higher.

29. (NEW) The method of claim 28, wherein the lysis mixture is warmed to a temperature of about 70° to about 95 °C.

30. (NEW) The method of claim 13, wherein the nucleic acids are present in the sample reaction vessel throughout the removing, resuspending and lysing steps.

31. (NEW) The method of claim 13, wherein the removing, resuspending and lysing steps take place within a reaction block.

32. [(NEW)] The method of claim 31, wherein the reaction vessels remain in the reaction block during the removing, resuspending, and lysing steps.

33. [(NEW)] The method of claim 13, further comprising the step of detecting the nucleic acids.

A3 cont sub B5

34. [(NEW)] A method of isolating nucleic acids from biological compartments of a fluid sample comprising the steps of:

incubating the sample in a sample processing vessel with magnetic particles which magnetic particles are capable of binding with the biological compartments;

positioning at least one magnet near an outside wall of the sample processing vessel such that the magnet holds the magnetic particles against an inside wall of the sample processing vessel;

removing the remaining fluid, from which the biological compartments have been separated, from the sample processing vessel;

introducing a second fluid into the sample processing vessel;

resuspending the magnetic particles in the second fluid by eliminating the magnetic force which held the magnetic particles against the inside wall of the sample processing vessel, and shaking the sample processing vessel;

lysing the biological compartments to form a lysis mixture; and

warming the lysis mixture; and

cooling the lysis mixture under conditions that make it possible to isolate or hybridize the nucleic acids to be isolated or detected.

35. (NEW) The method of claim 34, further comprising shaking the sample processing vessel during the incubating to facilitate the binding of magnetic particles to the biological compartments. --

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REMARKS

This is a divisional of Application Serial No. 08/930,247, filed February 17, 1998.

In this Preliminary Amendment, applicants cancel claims 1-12, and add new claims 13-35.

Favorable consideration is solicited.

Should any additional fees be due with respect to this paper, such fees may be charged to Counsel's Deposit Account No. 01-2300.

Respectfully submitted,
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